

IR-1744 (2-3570)

**TITLE: ACTIVE FILTER FOR REDUCTION OF COMMON MODE CURRENT**

ABSTRACT OF THE DISCLOSURE

An active filter for reducing the common mode current in a pulse width modulated drive circuit driving a load, said drive circuit comprising an a-c source, a rectifier connected to said a-c source and producing a rectified output voltage connected to a positive d-c bus and a negative d-c bus, a PWM inverter having input terminals coupled to said positive d-c bus and negative d-c bus and having a controlled a-c output, a load driven by said a-c output of said PWM inverter, a ground wire extending from said load, and a current sensor for measuring the common mode current in said drive circuit in said ground wire, said current sensor producing an output current related to said common mode current, said active filter comprising a first and second MOSFET transistor, each having first and second main electrodes and a control electrode, and an amplifier driving a respective one of the transistors; said first electrode of said first and second transistor coupled to a common node, said second electrodes of said first and second transistors being coupled to said positive d-c bus and said negative d-c respectively; each of said amplifiers having an input coupled to said output of said current sensor and each having an output connected to a respective one of said control electrodes; and a d-c isolating capacitor connecting said common node of said first electrode of said first and second transistors to said ground wire.